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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,232	03/09/2004	Yutaka Kobayashi	FUSA 21.043	2127

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EXAMINER	
NGUYEN, TUAN HOANG	
ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/796,232	KOBAYASHI, YUTAKA	
	Examiner	Art Unit	
	TUAN H. NGUYEN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-11 and 13-23 in the reply filed on 02/11/2009 is acknowledged. Although, Applicant in the response state that "In response to the Office Action dated January 27, 2009, Applicant elects Species 1, claims 1-23, identified by the Examiner for prosecution". However, Species 1 included only claims 1-11 and 13-23.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 6-10, 13-14, and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariyoshi et al. (US Pub. 2002/0021682 hereinafter, "Ariyoshi") and further in view of Padovani et al. (US Pat. 2003/0003942 hereinafter, "Padovani").

Consider claim 1, Ariyoshi teaches a transmission power control method that compares error rate of receive data and target error rate on a receiving side, controlling target SIR and causes a transmitting side to control transmission power in such a

manner that measured SIR will agree with the target SIR (page 1 [0005]; page 2 [0015] & [0019]; and page 5 [0049]), comprising the steps of: comparing the error rate of receive data after decoding and the target error rate of the data and controlling the target SIR by a result of the comparing in the interval in which data is being transmitted by data channel (abstract; page 1, [0011]; and page 2, [0015], [0017], & [0019] of Ariyoshi); measuring the error rate of a demodulated receive pilot in an interval in which data is not being transmitted and a pilot is being transmitted by a control channel (page 1, [0009]-[0010] and page 3, [0029] & [0031] of Ariyoshi).

What Ariyoshi does not explicitly teach is determining whether an interval is an interval in which data is being transmitted by a data channel; and controlling the target SIR upon comparing the measured error rate of the pilot and target error rate of the pilot in the interval in which data is not being transmitted and a pilot is being transmitted by the control channel.

However, Padovani teaches determining whether an interval is an interval in which data is being transmitted by a data channel (col. 27 lines 43-55); and controlling the target SIR upon comparing the measured error rate of the pilot and target error rate of the pilot in the interval in which data is not being transmitted and a pilot is being transmitted by the control channel (col. 27 lines 29-42).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a prevention that determining whether an interval is an interval in which data is being transmitted by a data channel; and controlling the target SIR upon comparing the measured error rate of the pilot and target error rate of

the pilot in the interval in which data is not being transmitted and a pilot is being transmitted by the control channel, as taught by Padovani, in order to improve performance by transmitting from the selected base station at the peak transmit power for the duration of one or more time slots to a mobile station at the data rate requested by the mobile station.

Consider claim 2, Ariyoshi further teaches the error rate of a synchronous word contained in a pilot is adopted as the error rate of the pilot (page 3, [0028]-[0030] & [0035]).

Consider claim 6, Ariyoshi teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR (Page 1, Para 0005; Page 2, Para 0015 & 0019; and Page 5, Para 0049 of Ariyoshi et al.).

Consider claim 7, Padovani further teaches a step of storing target SIR in control before a changeover is made from the control in the interval in which data is being transmitted to the control in the interval in which data is not being transmitted (col. Col. 27 lines 43-55).

Consider claim 8, Ariyoshi teaches a step of storing target SIR prevailing when the measured error rate of the pilot has attained the target error rate, after the changeover is made to the control in the interval in which data is not being transmitted (page 1, [0011]; page 3, [0019-0020]; and page 5, [0049]-[0051] in respect to page 5, [0047] of Ariyoshi).

Consider claim 9, Ariyoshi teaches a step of storing the difference between target SIR prevailing when the measured error rate of the pilot has attained the target error rate and the stored target SIR, after the changeover is made to the control in the interval in which data is not being transmitted (page 1, [0011]; page 3, [0019]-[0020]; and page 5, [0049]-[0051] in respect to page 5, [0048] of Ariyoshi).

Consider claim 10, Ariyoshi teaches a step of setting the stored SIR as target SIR when a changeover is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted (page 2, [0016]-[0017]; page 3, [0020]; page 4, [0046]; and page 5, [0047]-[0050] in respect to page 5, [0048] of Ariyoshi).

Consider claim 13, see explanation as set forth regarding claim 1 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing

a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 14, see explanation as set forth regarding claim 2 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 18, see explanation as set forth regarding claim 6 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 19, see explanation as set forth regarding claim 7 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 20, see explanation as set forth regarding claim 8 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 21, see explanation as set forth regarding claim 9 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 22, see explanation as set forth regarding claim 10 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

3. Claims 3-4 & 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariyoshi and Padovani as applied to claim 1 above, and further in view of Kim et al. (U.S Pub. 2003/0119452).

Consider claims 3-4, Ariyoshi teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR (page 1, [0005]; page 2, [0015] & [0019]; and page 5, [0049] of Ariyoshi).

Ariyoshi discloses a power control method in a communication system for performing communications by code-division multiple access between a mobile station and base station, wherein a multiple access interference signal contained in a reception signal from the mobile station is cancelled, a post-interference cancellation signal-to-interference power ratio of the reception signal currently received is estimated, a power control command is generated by comparing the estimated post-interference cancellation signal-to-interference power ratio and a target value for power control, and transmitting this power control command to the mobile station to control the transmission power of the mobile station.; which reads on claimed comparing the error rate of receive data after decoding and the target error rate of the data and controlling the target SIR by a result of the comparing in an interval in which data is being transmitted.

Ariyoshi discloses a target value setting portion 310 uses the tentative SIR target value acquired from the outer loop SIR target value setting portion 330 and the average estimated SIR value of the transmission time interval TTI in which the current pre-interference cancellation received signal is contained to update the target SIR value for power control when, for example, the difference there between is larger than a threshold

value; which reads on claimed controlling the target SIR upon comparing the measured error rate of the pilot and target error rate of the pilot in the interval in which data is not being transmitted. Note: The time interval TTI are receiving signals and is not transmitting.

What Ariyoshi does not explicitly teach is Transport Format Combination Indicator (TFCI).

However Kim teaches a step for determining whether an interval is an interval in which data is being transmitted based upon results obtained by decoding demodulated TFCI information and/or based upon TFCI information that has been demodulated by a modem (page 20, [0197]; page 22, [0209]; and page 27, [0248] of Kim).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate the control information such as uplink TPC (Transmission Power Control) command, TFCI (Transport Format Combination Indicator) symbol, and pilot symbol techniques, as taught by Kim, in the communication and power control method of Ariyoshi et al., because Ariyoshi et al. already teaches a channel estimation pilot signal, a TFCI (transport format combination indicator), FBI (feedback information) and a transmission power control command (TPC) (page 3, [0035] of Ariyoshi).

The motivation of this combination would be the effect of the frame structure of a dedicated physical data channel and a dedicated physical control channel in the uplink and the frame's slot, as taught by Ariyoshi in page 3, [0035]. The downlink DPDCH converts control signals such as the TFCI provided from the upper layer in accordance

with the frame's slot. This helps to perform a series of transmission processes such as channel coding and spreading, and provides its output (page 15, [0167]-[0171]; page 20, [0198]; page 22, [0209]; and page 27, [0250] of Kim).

Consider claim 15, see explanation as set forth regarding claim 3 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 16, see explanation as set forth regarding claim 4 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

4. Claims 5, 11, 17, & 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariyoshi and Padovani as applied to claim 1 above, and further in view of Jitsukawa et al. (US Pub. 2003/0012267 hereinafter, “Jitsukawa”).

Consider claim 5, Ariyoshi teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling

target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR (page 1, [0005]; page 2, [0015] & [0019]; and page 5, [0049] of Ariyoshi).

What Ariyoshi does not explicitly teach is upper and lower limits of the target error rate of the pilot.

However, Jitsukawa et al. teaches a step of setting the target error rate of the pilot is used in detection on the receiving side; which reads on claimed a manner that the transmitting and receiving sides will not become desynchronized, when the target SIR has been lowered upon comparing the measured error rate of the pilot and the target error rate of the pilot (figs. 1,7, & 9; page 1, [0005] and page 2, [0010]-[0011] in correspondence to page 1, [0001]-[0003] & [0007] and page 2, [0016]-[0017] of Jitsukawa).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a pilot is used in synchronous detection on the receiving side, as taught by Jitsukawa et al., in the communication and power control method of Ariyoshi et al., because Ariyoshi et al. already teaches obtaining synchronization timing (page 2, [0029] of Ariyoshi).

The motivation of this combination would be the effect of the received signal that is first despread by the despreading code of the dedicated physical control channel to obtain a synchronization timing, as taught by Ariyoshi.

As for claim 11, Jitsukawa further teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, wherein when the change is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted, a value obtained by adding the absolute value of the difference between the two stored target SIRs or the absolute value of the stored difference to the target SIR that prevailed prior to the changeover of control is set as the target SIR (page 6, [0061]-[0067] in respect to abstract; page 2, [0010] and page 3, [0019] of Jitsukawa).

Consider claim 17, see explanation as set forth regarding claim 5 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Consider claim 23, see explanation as set forth regarding claim 11 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Conclusion

5. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

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Randolph Building

401 Dulany Street

Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information Consider the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tuan H. Nguyen/
Examiner
Art Unit 2618